



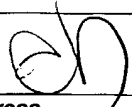
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/762,619	02/09/2001	Tom L. Young	10522/38	6551
7590 04/20/2004				
Brinks Hofer Gilson & Lione PO Box 10395 Chicago, IL 60610			EXAMINER LITHGOW, THOMAS M	
			ART UNIT 1724	PAPER NUMBER

DATE MAILED: 04/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/762,619	YOUNG ET AL.	
	Examiner	Art Unit	
	Thomas M. Lithgow	1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-24 and 32-35 is/are pending in the application.
- 4a) Of the above claim(s) 4-6 and 19-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 12-18, 24 and 32-35 is/are rejected.
- 7) ☒ Claim(s) 7-11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

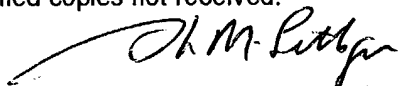
#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
THOMAS M. LITHGOW  
PATENT EXAMINER

#### Attachment(s)

- |  |   |
|--|---|
| <p>1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br/>Paper No(s)/Mail Date _____.</p> | <p>4) <input type="checkbox"/> Interview Summary (PTO-413)<br/>Paper No(s)/Mail Date _____.</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</p> <p>6) <input type="checkbox"/> Other: _____.</p> |
|--|---|

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. Claims 1-3, 12-18, 24 and 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harris (US 2120217). Harris discloses a froth flotation process which includes every aspect of claim 1 and 24 save for the air injection (silent) and the amount of natural oil employed in the process. Harris discloses the use of natural oils for the flotation separation of a complex lead-zinc-iron sulfide ore (see Ex. II page 4, col. 2, lines 61+). Therein the complex sulfide ore is differentially floated with lead being selectively concentrated first employing a mixture of lauric acid ester of diethylene glycol ammonium sulfate (noted hereafter as LAE) with corn oil. The corn oil is employed at 0.4 lbs./ton (based on twice the amount of LAE). In addition to corn oil the Harris process specifically mentions other natural oils which may be substituted in place of the corn oil (pg. 5, col. 1, lines 46+). These oils include cottonseed oil, olive oil, palm oil, sardine oil, lard oil etc. In froth flotation, air is employed as the flotation gas in every instance that is not specifically noted to be otherwise. Therefore the use of air in Harris is inherent. Harris employs 0.4 pounds per ton which is about 180 g/t which might reasonable be interpreted as slightly higher than "less

than about 100 g/t" as recited in claims 1 and 24. Harris further recites at pg. 6, col. 2, lines 23-35 that the amount of oil employed in the instant invention of Harris's is "not particularly critical" and that economics demands one employ the least amount possible while still being sufficient to achieve the intended benefit. Further Harris '217 discloses one may reduce the amount of oil employed by employing a frother (pg. 6, col. 2, line 60+). Also Harris '217 teaches that the amount of reagents employed is based on many factors including nature of the ore, the degree of separation desired, etc at pg. 7, col. 2, lines 1+. Since Harris teaches toward reduced oil amounts to so reduce the amount of oil employed to the range recited by applicant would have been obvious to one of ordinary skill in the art.

***Allowable Subject Matter***

2. Claims 7-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

## **2. *Response to Arguments***

Applicant adds new language to claims 1 and 24 reciting the oils contains no sulfur, nitrogen or phosphorus. This language is supported in the specification at page 6, line 25+. Applicant asserts that since Harris employs a compound in addition to the recited oil which contains sulfur or phosphorus than the claim language overcomes the rejection. This is not persuasive. An examination of the text in applicant's specification seems to suggest that the oil (itself) does not contain any sulfur, phosphorus or nitrogen. This phrase appears to be a statement directed at the prior art which typically employs compounds having sulfur, nitrogen or phosphorus as part of the molecule that defines the prior art collectors (ie xanthates have sulfur, dithiophosphates have sulfur and phosphorus, thionocarbamates have sulfur and nitrogen etc). Further, applicant, as part of his invention claims his oils in combination with , among other things, a "sulfur-containing sulfide mineral flotation promoter". If one were to subscribe to applicant's line of reasoning, these claims would be contrary to the specification and contrary to the independent claim from which they depend. The examiner's position is that the applicant's oils do not contain

sulfur, nitrogen and phosphorus (as part of the molecule) and neither do the Harris oils.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas M. Lithgow whose telephone number is 571-272-1162. The examiner can normally be reached on Mon. -Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blain Copenheaver can be reached on 571-272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thomas M. Lithgow

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Primary Examiner  
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TML